IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

DATATREASURY CORP.,	)	
Plaintiff,	)	
vs.	)	JURY TRIAL DEMAND
	)	
MAGTEK, INC., a/k/a MAG-TEK, INC., and	)	CV No.: 2-O3CV-459
	)	
SMALL VALUE PAYMENTS COMPANY,	)	CV No.:2:04-CV-85
Defendants,	)	
	)	

REBUTTAL DECLARATION OF PROF. JOHN HILES

1. My name is John Hiles. I am over the age of twenty-one, have not been convicted of a crime involving moral turpitude, and am not otherwise disqualified from making this declaration. The following information, which is within my personal knowledge, is true and correct.

2. On January 31, 2006, I submitted a declaration as to what a person skilled in the art would understand the term "image" to mean in the context of the DataTreasury '988 and '137 Patents and their respective file histories, along with various relevant dictionaries. Additionally, I have reviewed Defendant SVPCo's Responsive Claim Construction Brief along with Defendant Magtek Inc.'s Memorandum of Points and Authorities Regarding Claim Construction. Today, I offer my response to Magtek's and SVPCo's construction for the term "image." Additionally, I offer from my perspective as a person skilled in the art having reviewed the above materials my position regarding constructions offered by Defendant SVPCo in its Claim Construction Brief.

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3. All of the opinions provided in this declaration are:

a. Based upon sufficient facts and data to allow me to reach the opinions contained in this declaration;

b. My opinions expressed herein are the product of reliable principles and methods;

c. My opinions expressed herein constitute a reliable application of those principles and methods to the facts of this case; and

d. My opinions expressed herein are based upon information of a type reasonably relied upon by experts in the arts applicable (technical dictionaries, technical descriptions, technical publications, schematics, patent disclosures and claims) and analogous to the ‘988 and ‘137 patents.

4. By my education, training, and experience, as evidenced by my *curriculum vitae* (attached to my declaration of January 31, 2006), I am qualified to provide testimony on the understanding of persons of ordinary skill in the art relative to the ‘988 and ‘137 patents at the time of their filing.

5. It is my opinion that a person of ordinary skill in the art at the time of the ‘988 and ‘137 patents’ filing would have the equivalent of a Bachelor of Science in a technical discipline involving computational science, such as electrical engineering, computer systems engineering, computer science, or equivalent practical experience in the field of networked computing, computer hardware, software product development, or software engineering. In addition, this person should have exposure to Computer Industry User Groups, Vendor Training, or Trade Association events over a period of at least two years.

6. I understand that the claim terms should not be determined solely from the claim language alone, but that the broader context of the entire patent should be considered. Consequently, in this declaration, I analyze the language of each claim element at issue in view of the broader context of the term available through a careful reading of the '988 and '137 patents' claims, their specifications, and prosecution histories. Within this larger context, I give, as a person of ordinary skill in the art, what I consider to be a natural interpretation of the term image.

7. **Construction of the Term Image**

The term **Image** appears in claims 26 through 41 and claims 46 through 50 of the '988 Patent and claims 26 through 41 and claim 43 of the '137 Patent. Image is used consistently in the Patents' claims and specification in connection with the phrase, "image capture." "Image capture" is referred to in the Patents by the use of the phrase "capture." The Patents refer to capturing transaction data from paper transactions, documents, and receipts. (The '137 patent also refers specifically to capturing "the checks" in Claims 1 and 42). Claim 46 in the '137 Patent refers to image as follows, "capturing an image of the check at one or more remote locations and sending a captured image of the check."

The term **image** is used in the preferred embodiments of the specifications of the two DataTreasury Patents in a way that is consistent with its use in the Patents claims, as described in the previous paragraph. For example in Col. 5, lns. 46 through 54 of the '988 Patent and in Col. 5, lns. 52 through 60 of the '137 Patent, the following Patents specify how the DAT scanner **202** functions, "The DAT scanner **202** scans a paper receipt and generates a digital bitmap image representation called a Bitmap Image (BI) of the receipt."

A person of ordinary skill in the art, after reading the surrounding claim language, disclosures and file histories, would agree that the following definition of **image** gives an accurate explanation of the term's use and ordinary meaning in the '988 and '137 Patents, while at the same time remaining consistent with the somewhat broader definitions found in technical dictionaries, two of which are quoted below. The Construction offered for Image is as follows, "**Image** in the context of the '988 and '137 Patents is an electronic representation of an object, such as a document or receipt."

The representative nature of **image** is clearly present in the definitions of the word found in the IBM Dictionary of Computing (1994), on page 325 and in the McGraw-Hill Dictionary of Scientific and Technical Terms (1994), on page 992. The McGraw-Hill entry includes special definitions from a variety of fields, such as Acoustics, Communications, Math, and Psychology, but the most relevant one is from Physics. It reads as follows, "Any reproduction of an object produced by means of focusing light, sound, electron radiation, or other emanations coming form the object or reflected by the object." A person of ordinary skill in the art would agree that the definition used in this construction was justifiably narrower than the definition crafted to apply to a wide variety of sciences and engineering fields. The '988 and '137 Patents only refer to electronic images and thus, representations produced through the use of acoustic or "other emanations" would not apply to the DataTreasury invention.

Defendant Magtek states that the proper construction for **image** in all claims of '988 and '137 Patents is, "an electronic representation of an original document or receipt

(‘988 patent) or check (‘137 patent), such as a digital bitmap representation called a Bitmap Image, digitally recorded by an opto-electronic scanning or other recording device.”

Defendant SVPCO states that the proper construction for **image** in all claims of the ‘988 and ‘137 Patents is, “an electronic representation of an original document or receipt such as a digital bitmap representation called a Bitmap Image, digitally recorded by an opto-electronic scanning or other recording device.”

Plaintiff DataTreasury has revised its construction to remove language regarding the imaging subsystem. I agree with DataTreasury in doing this because the term imaging subsystem is not at issue and a person skilled in the art looking at the term image would not be readily concerned with how the image is captured, especially in view of the Court’s prior construction for imaging subsystem.

Thus, a person of ordinary skill in the art after reviewing the Data Treasury Patents would understand that the term **Image** in the context of the ‘988 and ‘137 Patents is an electronic representation of an object, such as a document or receipt.

8. Construction of the Term Central

Defendant SVPCo requests that the Court construe the word “central” of “central data processing subsystem” to mean a centralized subsystem, that is, a subsystem located at the center of the system communicatively connected, directly or indirectly, to all of the remote data access subsystems and to which all of the remote data access subsystems transmit encrypted images of documents and receipts containing paper transaction data and encrypted subsystem identification information.

This Court's Markman Order already addresses this term and defines Central data processing system (p.21 of the Markman Order) as, "a subsystem for centralized execution of processing, sending, and storing data received from one or more remote data access subsystems." A person of ordinary skill in the art would understand the contrast between central and remote that is drawn by the Court in this definition. It is understood after having reviewed the surrounding claim language, specification and file histories for the '988 and '137 patents that information collected remotely is sent over a communications network to reach a central location where a data processing subsystem provided other functions not present at the remote cite or in the remote subsystem. The SVPCo reference to "the center of the system" would seem confusing to a person of ordinary skill in the art. They would not know where to find a central point in a communications network, where "remote" might refer to a different floor or room in the same building as the central data processing subsystem, or to a subsystem located on the other side of the world from it.

Defendant SVPCo's Claim Construction Brief states (Section 3.A.1.g, pages 31 through 33) that "The 'tiered' network of the '988 Patent is a classic example of a well-known 'centralized network,' also known as a 'star network,' defined as a 'radial, or star-like, configuration of nodes connected to a central controller or computer in which each node exchanges data directly with the central node." A person of ordinary skill in the art, after reading the DataTreasury '988 and '137 Patents, would see that this statement does not apply to the DataTreasury system because the various subsystems of that system communicate with each other over communication networks (such as the internet and the "Carrier Clouds" indicated on Figures 2, 4, and 6) that place no such direct exchange requirement on the transmission of data. The reference to the DataTreasury Systems' use of DNS (Dynamic Name Service) on Col. 11, lines 57 to 67 is particularly clear and explicit in stating that the DataTreasury System makes use of dynamic Internet communications rather than fixed, direct paths as described above by the SVPCo reference to a centralized or star network Other references to internet and WEB may be found throughout the '988 and '137 Patents (Col. 2, line 56; Col. 4, line 20; Col. 6, line 27; Col. 6, line 32; and this latter reference on Col. 11, lines 57 to 67).

Table 1 on p. 33 of the SVPCo Brief places figure 1 from the Data Treasury '988 and '137 Patents side by side with a diagram of a Centralized Network or "Star Network". The Data Treasury '988 Patent describes the preferred embodiment depicted in Fig. 1 as "a block diagram showing the three major operational elements of the invention…" (Col 4, ll 35..39). Figures 2, 4, and 6 in the '988 Patent present block diagrams of the preferred embodiment regarding DAT, DAC, and DPC architectures, showing how they connect to the rest of the DataTreasury System. Each of these diagrams show that these major operational elements are connected to each other through "Carrier Clouds" or communications networks. The '988 and '137 Patents also clearly refer to "at least one" central data processing subsystem throughout their claims (that is there indeed may be more than one central data processing subsystem). A person of ordinary skill in the art would recognize that the architecture diagrams shown in figures 2, 4, and 6 of the Data Treasury Patents and the explicit references to more than one central data processing subsystems describe a system that is the antithesis of a "centralized network" or "star network." (Another example of the '988 Patent's reference to multiple central data processing subsystems can be found in the patent's claim 29, which refers to "said collecting, processing, sending and storing step occurs at a plurality of central locations." Rather than a system where all data flows to and from a single, central hub – as is the case with a centralized star network – the DataTreasury '988 and '137 Patents describe a system with multiple remote and central subsystems, connected by one or more communications networks, such as the internet. A person of ordinary skill in the art would not agree with the "centralized network" interpretation of the DataTreasury system nor with the constructions based upon the arguments presented by SVPCo in its Brief.

This Court's Markman Order defines Communication Network (p.32) as, "a connection of computer and/or devices to facilitate the transmission of data between the computer and/or devices." A person of ordinary skill in the art would readily understand this definition and would see that it applied to the "Communication Cloud" label included in Figures 2, 4, and 6 of the '988 Patent, which describe the DataTreasury invention's architecture.

Thus, as a person of ordinary skill in the art, I find that both the use of the word **central** and the term **Central data processing subsystem** in this Court's Markman Order to be clear and easy to understand. On the other hand, the term introduced by SVPCo of the "center of a system" would be difficult for a person of ordinary skill in the art to reconcile with his or her standard notions of a communications network, where geographic distances are often not observable.

9. Processing, Sending, and Verifying in the Context of Central Data Processing Subsystem in Claim 1 of both the '988 and '137 Patents

Defendant SVPCo requests that the Court construe the phrase "processing…the paper transaction data and the subsystem identification information" in the context of a "central data processing subsystem:" to mean "centrally systematically performing operations upon both the paper transaction data and the subsystem identification information, necessarily including: decrypting the received encrypted images of documents and receipts and the received encrypted subsystem identification information, extracting the paper transaction data from the images, performing meaningful analysis of the paper transaction data and the subsystem identification information, and generating informative reports based on the paper transaction data and the subsystem identification information, in contrast to the processing overhead of operating systems and networks and for implementing communication protocols."

Defendant SVPCo also requests that the Court construe the phrase "sending…the paper transaction data and the subsystem identification information" in the context of a "central data processing subsystem" to mean "electronically sending both the extracted paper transaction data and the subsystem identification information from the central data processing subsystem to a location outside of the central data processing subsystem."

Defendant SVPCo further requests that the Court construe the phrase "verifying…the paper transaction data and the subsystem identification information" in the context of a "central data processing subsystem" to mean "centrally checking or testing the accuracy, exactness or authenticity of both the extracted paper transaction data and the subsystem identification information by comparison with known data or a recognized standard or authority."

A person of ordinary skill in the art can readily follow the Court's Markman Order construction for Processing (p.27 of the Order), "the performance of operations upon data and information upon data and information, in contrast to the processing overhead of the operating system and networks." The same is true for the Markman definitions of Sending (p.28), "Sending electronically" and Verifying (p.31) "checking or testing the accuracy, exactness or authenticity of." A further positive quality of these definitions is that they do not imply that the same processing, sending, and verifying functions would apply to both the transaction data and the subsystem identification information. A person of ordinary skill in the art would understand that these two kinds of information (the transaction data and the subsystem identification information) are quite different, that they are used in different ways by the DataTreasury system, and that they are captured and encrypted in different ways. For example in claim 1 of the '988 patent, the transaction data is captured when a scanner creates an electronic image, but the subsystem identification information (defined in the Markman Order on p.16 as, "the information that identifies the remote data subsystem or a subsystem that is a part of the remote data access subsystem) need not be scanned and does not come directly from the documents or receipts. Information such as DAT_Unit_Number and DAT_Terminal_ID, which identifies remote data subsystem or subsystems that are part of the remote data access subsystem, would be obtained directly from the System hardware and software. The encryption of Subsystem Identification Information would also differ from the encryption of transaction data. Because Subsystem Identification Information, such as DAT_Terminal_ID among others, are stored in the TECBI packet tags along with the TECBI packet encryption keys, a person of ordinary skill in the art would readily understand that the tag information would need to be encrypted before sending the packets. Network facilities for this encryption would be easily employed. A person of ordinary skill in the art would understand that sending the tags with their packet encryption keys in the clear would have been a significant mistake, and rather would have used standard network facilities to accomplish the encryption. This Court's Markman Order constructions for processing, sending, and verifying (as well as the construction for Subsystem Identification Information) would be meaningful and recognizably accurate to a person of ordinary skill in the art who reviewed these terms in the broader context of the entire '988 and '137 DataTreasury Patents.

Defendant SVPCo's suggested construction for processing, verifying, and sending in the context of central data processing would seem overly limiting to a person of ordinary skill in the art. The SVPCo construction that deals with processing, for example, attempts to equate a common technical term, **processing** (which is well defined by the Markman definition), with **specific examples of processing** that are included in the DataTreasury Patents' preferred embodiment sections. To a person of ordinary skill in the art, it is quite understandable that **processing** takes place within the Remote Access and Central Data Processing Subsystems in the various ways described by the DataTreasury Patents in their preferred embodiment example. But it would be incorrect to say that to a person of ordinary skill in the art, the term **processing** is the same as or is circumscribed by those examples. The '988 Patent refers to processing examples that would not be covered by the narrow construction offered by SVPCo: data manipulation language processing ('988 Col 16, line 41) and processing to support the retrieval of transaction data from its data bases (Col 21, line 46) among others.

SVPCo's construction regarding sending and verifying also suffers from the same approach. For instance, the '988 Patent describes the use security policies to control the access by customers attempting data retrieval (Col. 22, lines 1-11). This form of validation would not be covered by the SVPCo construction for verifying in the context of central data processing subsystem. It seems to me that SVPCo is determined to have these terms be interpreted as narrowly as possible. However, a person skilled in the art having read the patents fully along with the file histories would not construe these terms as such. Rather, they would have reached a conclusion as the Court did in its construction.

10. Storing in the Context of Central Data Processing System

Defendant SVPCo requests that the Court construe the phrase "storing the paper transaction data and the subsystem identification information" in the context of a "central data processing subsystem" to mean centrally electronically recording both the extracted paper transaction data and the subsystem identification information in permanent or semi-permanent form in auxiliary storage devices that permit later retrieval of that data and information.

A person of ordinary skill in the art would understand the Court's constructions for paper transaction data, transaction data, and data (p.20 of Markman Order), particularly in the sense that "paper transaction data includes an image of the paper document when it is transmitted from the remote data access subsystem." This inclusion of image appears to be left out of the SVPCo construction mentioned in the paragraph above. **Storing** has a clear meaning to a person of ordinary skill in the art. As explained in section 10 above, the term should not be confused with specific examples taken from the DataTreasury Patent's description of a preferred embodiment. The SVPCo construction is confusing because it equates the term **storing** with only **examples of storing**. A person skilled in the art having reviewed the patents fully and their respective file histories would not have a temporal limitation on this term. That is, whether retrieval happened one second or one month after storage in the memory device, the operation would still be recognized as storage.

11. Nature of Subsystem and Location of Central Data Processing Subsystem

Defendant SVPCo requests that the Court construe the phrase “central location” to mean “synonymous and used interchangeably with a central data processing subsystem: a centralized subsystem, that is a subsystem located at the center of the system communicatively connected, directly or indirectly, to all of the remote data access subsystems and to which all of the remote data access subsystems transmit encrypted images of documents and receipts containing paper transaction data and encrypted subsystem identification information.”

Defendant SVPCo further requests the Court to construe the word “location” and “locations” to mean “ ‘remote location(s)’, ‘intermediate location(s)’, and ‘central location(s)’ are respectively synonymous and used interchangeably with the remote data access subsystem(s), intermediate data collecting subsystem(s), and central data processing subsystem(s) at those locations.”

The Markman Order definition of Subsystem (p.16) states that a subsystem is, “an organization of computer components that comprises a functional unit that is part of a larger system.” A person of ordinary skill in the art would know that banks, for instance, are not subsystems in the context of the DataTreasury ‘988 and ‘137 Patents. He or she would understand that whereas a subsystem might be halted or shut down for maintenance or updates, the bank, bank location, or other organization would not operate according to the same policy. The Markman Order Definition of Subsystem is readily understood by a person of ordinary skill in the art, but the SVPCo proposed construction would conflict with the skilled person's training and experience and lead to confusion.

12. Documents and Receipts

Defendant SVPCo requests that the Court construe the phrase "documents and receipts" to mean, "written or printed papers [documents] and written or printed paper acknowledgements of something received such as money or goods [receipts], but not "checks" as recited in the '137 Patent."

This exclusion of checks from the meaning of "documents and receipts" is not justified from a technical perspective. A person of ordinary skill in the art would understand that the '988 Patent is fully capable of processing checks. There is no technical limitation in the DataTreasury invention described by the '988 Patent that would prevent it from processing checks. The '988 Patent states (Col. 5, lines 51-54), "Next, the DAT scanner **202** has the ability to perform full duplex imaging. With full duplex imaging, a scanner simultaneously captures both the front and back of a paper document". Full duplex imaging is a particularly important requirement for check image processing. A person of ordinary skill in the art would find no limitation in the '988 Patent or file history that excluded checks from being processed by the DataTreasury invention.

13. Collecting, Processing, Sending, and Storing in Claims 26 of '988 and '137 patents.

Defendant SVPCo requests that the Court construe the phrase "collecting…[paper] transaction data at a central location" to mean gathering together or accumulating paper transaction data by a central data processing subsystem.

Defendant SVPCo also requests that the Court construe the phrase "processing…[paper] transaction data at a central location" to mean centrally systematically performing operations upon the paper transaction data, necessarily including: decrypting the received encrypted images of documents and receipts, extracting the paper transaction data from the images, performing meaningful analysis of the paper transaction data, and generating informative reports based on the paper transaction data, in contrast to the processing overhead of operating systems and networks and for implementing communication protocols.

Defendant SVPCo requests the Court to further construe the phrase "sending…[paper] transaction data at a central location" to mean electronically sending the extracted paper transaction data from the central data processing subsystem to a location outside of the central data processing subsystem.

Defendant SVPCo also requests that the Court construe the phrase "storing…[paper] transaction data at a central location" to mean centrally electronically recording the extracted paper transaction data in permanent or semi-permanent form in auxiliary storage devices that permit later retrieval of that data.

This Court's Markman Order, on pages 20 through 27 lays out a construction that distinguishes between "paper transaction data," "transaction data," and "data." A person of ordinary skill in the art, upon reading that construction would note that "paper transaction data" is only one of several kinds of transaction data (p. 25): The term "transaction data," in general encompasses more than simply "paper transaction data." The constructions suggested by SVPCo for Collecting, Processing, Sending, and Storing within the context of the central data processing subsystem would all limit transaction data being collected, processed, sent, and stored to “extracted paper transaction data.” A person of ordinary skill in the art, after reading the Court’s Markman Order construction for “paper transaction data,” “transaction data,” and “data:” would disagree with the SVPCo constructions because they are overly narrow and leave out important types of transaction data other than paper transaction data.

A person of ordinary skill in the art, after reviewing each of these claim elements in the context of the ‘988 and ‘137 patents’ claims, specifications, and prosecution histories would find that the constructions offered by SVPCo were overly qualified or narrowed and did not cover the full context of these Claim 26 terms of the ‘988 and ‘137 patents. Each of the constructions suggested by SVPCo equates the technical terms, **collecting, processing, sending and storing** with specific examples of the same four technical terms (taken from the preferred embodiment description in the patent). On the other hand, the constructions provided in the Markman Order would be understood by that person of ordinary skill in the art to fit the broader context of the DataTreasury Patents and not just the preferred embodiment description.

Storing is not constructed by the Court’s Markman Order. A person of ordinary skill in the art would understand **storing** in its ordinary technical sense: placing data in a memory device where it would remain for later retrieval. Whether the subsystem doing the storing was a remote data access subsystem or a central data processing subsystem, the storing would involve its ordinary meaning. Whether the data being stored was data, transaction data, or paper transaction data would, in my opinion as a person of ordinary skill in the art, depend on the construction offered by this Court in its Markman Order (p. 20 through 27).

14. Temporal Relationship of Method Steps.

Defendant SVPCo requests that the Court require the steps in claim 46 of the ‘988 patent to be performed only in sequential order as the steps are presented. But a person of ordinary skill in the art would understand that the method steps mentioned in the ‘988 and ‘137 Patents need not and in many cases would not occur in a specific sequence. Transmissions at one subsystem or another might, during normal operation of the system, take more than once and at different times to serve various purposes in the system. Retransmissions caused by network effects or communication errors, requests for information by operators or users, or exchanges initiated by application software at any of the major subsystems are some of the reasons why a construction requiring a sequential order of transmission would fail to represent the parallel operations of a system like the DataTreasury invention and the communication networks upon which it is based. A person of ordinary skill in the art would understand the asynchronous nature of the subsystems and nothing in the specification or files histories would cause a person skilled in the art to understand differently.

DECLARATION

In accordance with 28 U.S.C. § 1746, I, John Hiles, Professor., declare under penalty of perjury under the laws of the United States that the foregoing expert report is true and correct. Executed on the 14th of March, 2006.

JOHN HILES, PROFESSOR.